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BULLETIN 485

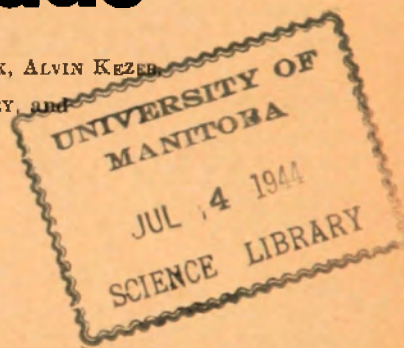
APRIL 1944

# Buying a Farm in Colorado

R. T. BUEBICK, ALVIN KEZER

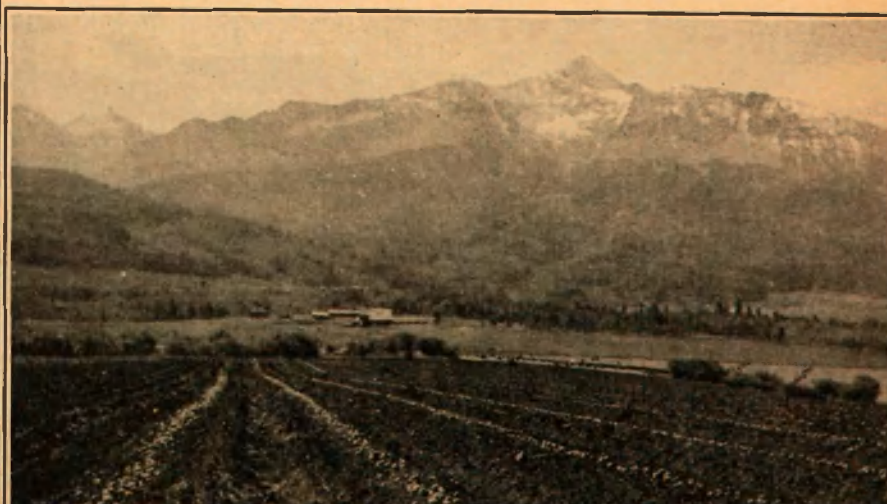
A. M. BINKLEY, JR.

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COLORADO AGRICULTURAL EXPERIMENT STATION  
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# Buying a Farm In Colorado

R. T. BURDICK, ALVIN KEZER, A. M. BINKLEY, and R. C. TOM<sup>1</sup>

Farmers from other states find it necessary to use new standards in measuring prospective purchases in Colorado. The types and varieties of Colorado agriculture show wide differences.<sup>2</sup> Each requires special attention. Actually each individual purchase is a special problem, yet certain broad over-all conditions can be identified for the major types of farming.

It is the purpose of this brief outline to call attention to some of the more important of these so that the prospective purchaser can use them to guide him in his individual selection of a new farm home. Care spent in the original selection will avoid later disappointment. There is no substitute for good judgment; there are many ways to improve judgment. One way is to know what one is buying and what to look for when buying.

## Farming vs. Ranching

In Colorado "ranching" is commonly thought of as the raising of cattle or sheep by the use of comparatively large areas of grazing land with a minimum of "crop production" other than the raising of necessary feeds.

Farming typically means the raising of crops, either under irrigation or on non-irrigated lands (commonly called dry farming). Under irrigation, general farming is the most widespread type, meaning the production of hay and grain for feed with some additional crops for sale as cash crops. In local areas irrigated farming takes on a more specialized nature and the entire farm will be built around the production of such specialized crops as potatoes, sugar beets, dry beans, vegetable crops, or fruits. Some general farms build their feed-crop production around the dairy as the important kind of livestock. Others stress the winter fattening of lambs or cattle. Some specialize in purebred livestock or poultry. The varieties and combinations become almost endless. Each has its own peculiar needs, lim-

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<sup>1</sup>Burdick, acting rural economist; Kezer, chief agronomist; Binkley, horticulturist; and Tom, animal husbandman, Colorado Agricultural Experiment Station. The authors wish to thank Dale S. Romine of the Experiment Station and K. S. Irwin of the College staff for preparation of the maps and T. H. Summers, J. E. Morrison, and T. G. Stewart of the Extension Service for helpful suggestions in preparing this publication.

<sup>2</sup>"Colorado Agricultural Statistics" issued jointly each year by the U. S. Department of Agriculture and the Colorado State Planning Commission is a valuable aid to one seeking information regarding crop acreages and yields, livestock numbers and location, and weather records. It is available from the office of Floyd K. Reed, agricultural statistician, 543 Custom House, Denver 2, Colo.

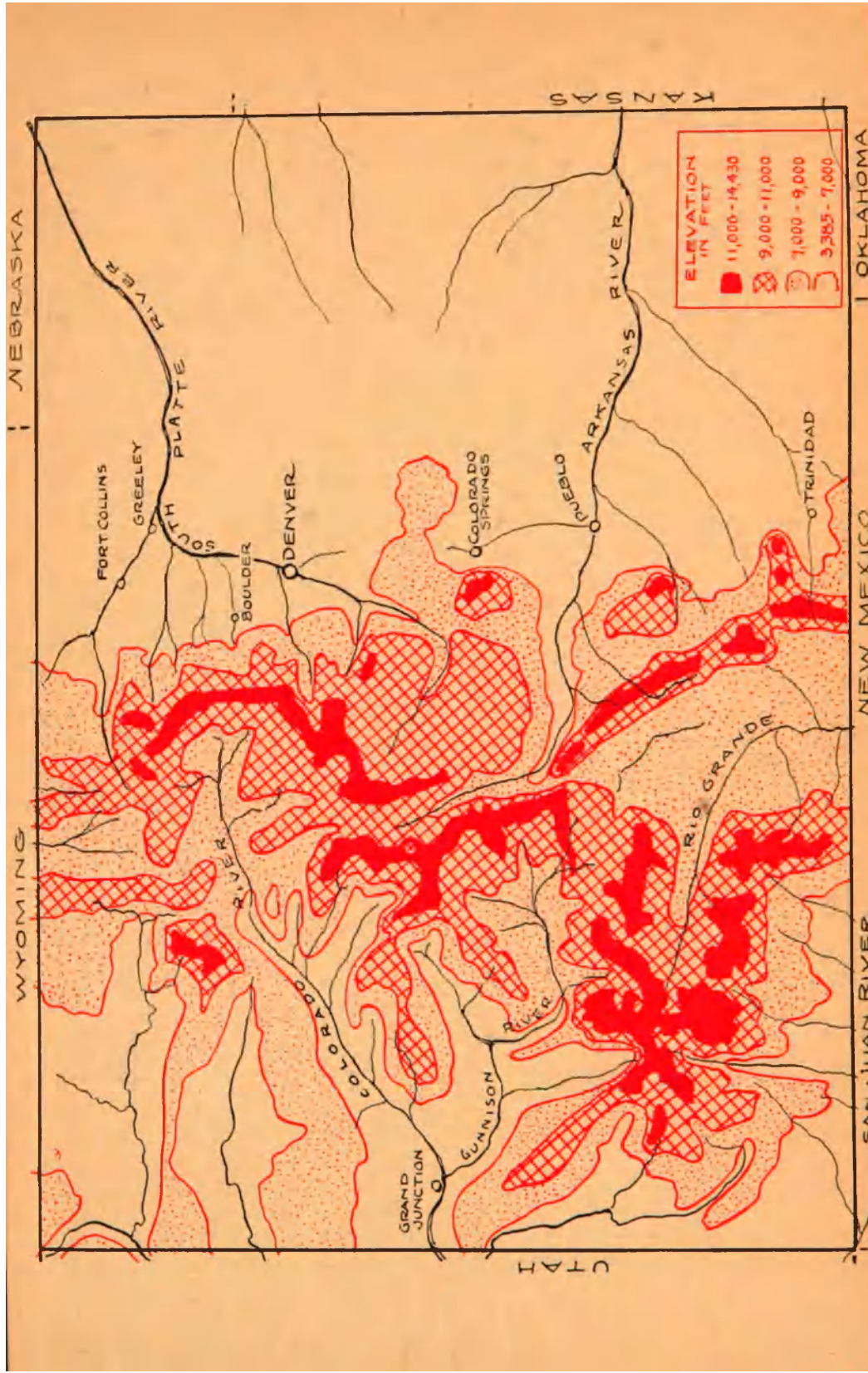
itations, and requirements. A farm well adapted to one type of business will be a sorry failure for other purposes. Whole communities have been built around some one crop or livestock as the chief source of income. In other communities many highly diverse types of farming are found, intermingled or separated by but a few miles. All these are conditions which must be kept in mind by the newcomer.

In the following pages some of the more widespread types of farming will be discussed, with important points to be considered regarding each. Localities where these may be found will be given. Omission of some specific area does not mean that such types are not to be found there nor should it be taken to mean that these types will not succeed elsewhere. It does mean that the buyer should know what he wants and be prepared to check carefully before committing himself to an investment.

### **Dry-Land Farming**

Dry-land farming is typical of the eastern plains area of Colorado, with smaller local areas in northwestern and southwestern Colorado and in some other scattered parts of the State. Such farming requires comparatively large areas of deep, fertile soil—soil which has the capacity to store moisture from season to season. The ground must be fairly level to allow water to soak in rather than to run off too quickly after a rain.

The purchaser of such non-irrigated lands should pay cash or make a very substantial down payment. He should plan his operations so that he combines both cash crops and livestock. He needs to build up feed reserves in a stack, silo, or trench silo in flush years to tide him over periods of as long as 2 or 3 years of scanty rainfall with very little forage production. He needs to plan for financial reserves to carry him over periods of total or partial crop failure. For those unfamiliar with non-irrigated plains farming one word of caution is vital: Soil must be protected from wind erosion. The plains typically have broad sweeps of soil surface exposed to wind and storm. Originally these lands were in native grasses. In the shift from grass to cultivated crops the first result was the plowing of soils which were too light and sandy. Winds caused much damage. Years of trial and error have resulted in the discovery of methods for handling these soils to reduce the blow hazard, but for the lighter, sandier soils the original grass cover still remains the only enduring answer. As the soil grades to the heavier types, special practices have been perfected which largely eliminate the blow hazard. These methods must be mastered and used by newcomers if they are to avoid serious losses. On very sandy soils, grazing and livestock production should be the chief method of farming. Exceptions to this rule are rare.





The size of a non-irrigated farm necessary for an adequate income will vary with the individual, but few find that they have purchased too large a farm. The errors are mostly on the other side, namely, too small a farm. Although in the areas with the best rainfall record, 320 to 640 acres have given a reasonably good income, 640 to 1,280 is a safer range in size since this will give more land for livestock grazing. Beyond 1,280 acres the size will be a personal matter, except in the communities where the major portion of the land should be in grazing land. Many find that they can manage more than this and operate on a correspondingly larger scale. Modern labor-saving grain machinery is expensive and needs large areas to give the most economical use of machinery. Several thousand acres can be handled by skillful operators.

Under normal conditions on the dry lands one finds short periods or several years which are either "better than average" or "worse than usual." The error of many is that they consider the best years normal. The unusual is normal when it comes to weather. One must be prepared for any kind of weather or drought in the plains. Those methods of farming which conserve both rain and soil should be stressed. "Pay cash and ride the storms and droughts" should be the motto for the dry-land farmer.

## Cattle Ranching

Cattle ranching is found side by side with dry farming on the eastern plains, but more typically in those local communities of the plains where soil and weather are more favorable for permanent sod and grazing. It is also a major type of farming in the mountainous areas of Colorado under entirely different conditions. Each must be considered separately.

**Plains cattle ranching** requires large areas of grazing land either owned or available for lease. The central key to size is the number of cattle in the outfit. Grazing is almost year-long; hence the more cattle the more acres are necessary. The minimum number of cattle needed to supply a reasonably satisfactory income will depend upon the level of cattle prices and upon the standards which one may set for his own individual way of living. Attention to the details of cattle management will be an important controlling factor. Few experienced cattlemen will be satisfied with 100 head of cattle. Many will plan to own and manage 500 or 1,000 head.

Local experience will determine the number of acres necessary for grazing and feed production. From 30 to 50 acres per head will be necessary in most cases. That means 3,000 to 5,000 acres for 100 head, and 15,000 to 25,000 acres for 500 head. Naturally such lands

must be relatively low in per-acre cost if the cattle are to produce enough to make the business a success.

The kind of vegetation must be considered since permanent sod cannot be quickly replaced. Adequate fences, windbreaks, and well-located water supplies for livestock are vital to satisfactory production. Long-time leases may be as satisfactory as ownership, but they offer less security than outright cash purchase. For successful livestock production in the plains areas, attention should be given to the sources of stock water. Local dams to catch flood waters, deep wells, or other developments should be so spaced and scattered that the livestock will roam more freely over the entire range yet be within traveling distance of water. If adequate water is not available, the probable costs for water development should be considered by the newcomer. Likewise some attention should be given to the problem of poisonous weeds which occur in certain localities. Their presence adds to the financial hazards of ranching. Special methods have been developed to control these weeds and to reduce death loss. Here forewarning may be essential to success.

**Mountain cattle ranching** in western Colorado operates under entirely different conditions. The large part of the available grazing land is under federal control in the national forests or in grazing districts. Permits for the use of these grazing lands are needed. Ranch operators can own their headquarters and land for production of winter feed and for spring and fall grazing. Winter feeding is very important; hence good hay land is the first essential. Where this is located close to grazing permits, costs of operation are less and supervision of cattle more effective. A few operators have experimented with irrigated summer grazing on former hay meadows, thus keeping their entire operations under closer supervision. Typically from 1 to 2 acres of hay meadow and 10 to 15 acres of spring and fall grazing are needed for each head of cattle. This means that 100 head will need from 1,100 to 2,000 acres of owned land besides the necessary permits for use of national forest or for grazing district lands. With 500 head of cattle these corresponding areas will be 5,500 to 10,000 acres. Here again water holes, fences, and improvements for winter care and feeding are important.

Some communities are poorly located for control of livestock. Supervision of cattle on rough lands is difficult, and as a result calf crops are lower and costs of operation are higher per unit of production.

Local practice as to the breed of cattle, the quality of sires used, and the results from cattle production should be studied carefully before deciding upon one's own plan of management. A new breed





will not mingle on the open range without causing needless friction. If livestock is to be kept entirely under private fence this is not so essential, but even here little will be gained by going counter to local experience. The costs of private fencing may prove too great to leave much opportunity for profitable production.

Opportunity for further expansion is also important. Typically this will come by buying out existing outfits, since all the land is in use.

### **Cattle Ranching vs. Sheep Ranching**

The native vegetation on privately owned grazing lands and upon federal lands used in connection with the ranch may be a vital factor in determining the choice of making the ranch into a cattle or a sheep ranch. These two kinds of livestock require different vegetation for their best development. The newcomer should study this condition very carefully. Some plants are poisonous to cattle but not to sheep, and the reverse is also true. Local experience is the best source of guidance. Some vegetation is adapted to either cattle or sheep, yet better results will usually follow the selection of a kind of livestock similar to that already present. This likewise applies to the matter of selection of breeds of livestock.

The remarks about cattle ranching cover points which are important for sheep ranches. In general five head of sheep are considered the equivalent of one head of cattle.

The wintering of sheep and the selection of a favorable location for spring lambing need special attention. Where sheep are to be wintered in valleys with heavy snowfall, many operators have developed methods of handling which require moving the sheep to open winter range. This involves leasing of federally controlled lands. Permits must be secured for grazing these lands. Wintering sheep on hay in the valleys requires much extra care and attention to keep sheep healthy.

### **Irrigation Farming**

General irrigated farming is found along the important streams in the South Platte and Arkansas River Valleys of eastern Colorado and along the Rio Grande and Colorado Rivers of western Colorado, with smaller areas along other valleys. Irrigation farming differs radically from farming in the humid areas of the Middle West and other parts of the United States. *Water rights, which in Colorado are not attached to the land*, the priorities as to use of water, the season of the year when direct irrigation water is available, the

amount of such water, the amount of water storage for late irrigation, the cost per acre for all sources of water and the over-all bonded indebtedness in connection with water developments, the methods for retiring such water debts, the source of water used for pump irrigation and the possibility of its being exhausted, and the need for additional labor in applying irrigation water all are items to consider in farming under irrigation. The costs related to these items are not present in humid areas.

The slope of the surface is an important factor affecting the distribution of irrigation water. Special attention should be given to existing practices and to seasonality of the flow of the individual water right supplying water to the farm. The soil should be deep and easily worked. Sub-drainage should be available to avoid accumulation of alkali salts from the subsoil water movement.

Soils in the irrigated sections of Colorado are generally "fertile" when measured by standards common in the humid areas, but there is much variation in the types of soils being irrigated. Each soil has special limitations as to methods of water application, amounts of water needed for crop growth, presence of excess soluble salts, and crops which are best adapted. Rotations have been developed which recognize these needs; limitations and best-adapted crops are matters of local knowledge.

In the period from 1900 to 1930, 160 acres were quite commonly considered adequate for a general irrigated farm. The introduction of labor-saving power machinery has permitted one man to handle larger areas. With new and improved machinery 200 to 400 acres per farm are better for economy of operation and maintenance of high standards of living.

Men have spent their lives on 80 to 100 acres and maintained a fair living, but success is more difficult and operations less economical on the small farm. One starting on a farm of this size should understand the limitations of size and plan for production of more specialized crops, hoping thereby to increase income per acre.

Local marketing and transportation facilities are necessary to handle specialized crops. The successful introduction of specialized crops frequently depends upon the presence of essential marketing and transportation facilities. These should be considered *before* purchasing, instead of afterward. Likewise there is some local variation in the amount and cost of credit for farm operation.

Another problem relates to labor supplies. If crops common to an area are grown, local labor has typically adapted itself to these crops. For new crops adequate skilled labor may prove to be the key to success.



The winter fattening of cattle or lambs fits into economical use of labor on general irrigated farms. The man who is kept busy during the growing season irrigating 125 to 175 acres of crops can have year-around employment by feeding livestock in the winter. Those kinds of livestock requiring heavy use of labor in the summer compete with irrigation. For this reason all kinds of livestock enterprises, other than winter feeding or the specialized year long fattening on irrigated farms, tend to be kept at a comparatively small scale of development so that their care is a sideline rather than the chief source of income. In specialized areas where market demand justifies, dairying, hog production, or poultry production will be a major enterprise on irrigated farms. People from humid regions need to study this situation carefully since they cannot judge Colorado irrigation farming by Corn Belt standards.

Specialized irrigated farms include a wide list of possibilities. Each requires special attention. In comparison with general irrigated farming, costs are higher, risks are greater, and anticipated profits cannot be judged by general standards.

Vegetable production typically has been concentrated where soils are "mellow" and rich in organic material and can be easily worked. Modern transportation is now permitting this type to be located farther from market, but in times of low prices nearness to market is still a major factor in success. Irrigation water supplies that are adequate and available for late irrigation are especially important on the vegetable farm. Special climatic conditions, especially air drainage, have caused irrigated fruit farms to be located typically at the outlet to deep mountain river canons where the air movement helps to protect against frost damage. Where conditions are favorable, 10 to 40 acres have been sufficient for full-scale operation. Attempts to operate on so small a scale in general farming have generally met with disappointment if not with financial disaster.

One of the chief difficulties with the one-crop specialized farm is the limitation it places upon long-time successful operation. There will be no other source of income to fall back on when market prices on the one crop are low. In many cases a diversity of crops and a rotation of crops are almost vital to maintaining a healthy, productive soil. The small farm offers little chance to avoid these difficulties. It differs from small farms in the humid areas in that irrigation costs are an added expense which must be met from income. This means that the small farm cannot escape a heavier load of cash operating expenses than one in the humid areas. Experience with a self-sufficient small farm under humid conditions is not a safe guide to probable results under irrigated conditions.



Lower costs in poultry production will be possible where adequate irrigated pasture is available for the poultry. This requires fencing and necessary facilities for rotation of pastures and control of poultry diseases. Such farms have their best chance for success when relatively close to a good market and to a good source of supplies and necessary feeds.

### **Part-Time Farming**

Where a farm is too small to offer satisfactory income under average conditions, it may be a good place to live for the man who has outside income or a trade or profession for the major source of his income. This is a special problem. Typically the "other trade or profession" should be the first consideration. If the farm is purchased first, it may not be located where other work is available.

### **Paying for a Farm**

Buying a farm would be a simple matter if one had money enough for the entire cost. Unfortunately, many buy a farm with a small down payment, hoping to pay the balance from the earnings. But farm earnings are never as certain as the fact of the annual payment which must be made on this debt. When a farm is entirely paid for, annual savings can be used to improve the place, to buy equipment which will reduce production costs, to do many things which will increase earnings. But as long as the farm is in debt these annual earnings usually must be used to reduce the debt. The smaller the down payment, the more serious is this handicap. Farming is a highly competitive business. Frequently the annual earnings are low. To use some of these earnings to make annual payments on a farm debt may mean that the farmer and his family are going without goods and home conveniences which are essential to good health. It is poor business to pay for a farm by sacrificing health.

Again, some farm mortgages are placed for short periods of 3 or 5 years. This means added expense for renewal of the mortgage with the chance that the farm may be lost through foreclosure.

Where a farm mortgage must be part of the purchase cost it should be made for a longer period of years, 10 to 30. The annual payments per \$1,000 of mortgage required to pay off the debt by the end of its life (called amortization of a debt) will vary with the number of years and with the interest rate. The following table shows what these annual payments are for debts running 10, 20, and 30 years with 4, 5, and 6 percent annual interest. (One should make arrangements which will permit him to pay more than this at any one payment to give a chance to use good years to reduce the debt.)

Yearly payments per \$1,000 loan

Years to pay loan	Interest rate—percent		
	4	5	6
10	\$123.29	\$129.50	\$135.87
20	73.58	80.24	87.18
30	57.83	65.05	72.65

Farm loans can be secured from many agencies, local and national, for these long terms. *Check carefully on title and terms before making the final decision to buy.*

### Summary

The prospective purchaser of a Colorado farm or ranch must decide for himself by personal investigation what type of farming he prefers and then consider a specific farm as adapted to that type of farming. Occasionally he can start a new type of farming in an area where it is not already successfully developed, but he should be familiar with all the conditions in this case or be prepared to survive mental and financial disappointment.

This summary has stressed points requiring consideration by prospective buyers. It has not attempted to make any comparative statement as to possible profits from different types of farming. Typically "profit" comes from individual effort wisely directed.

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